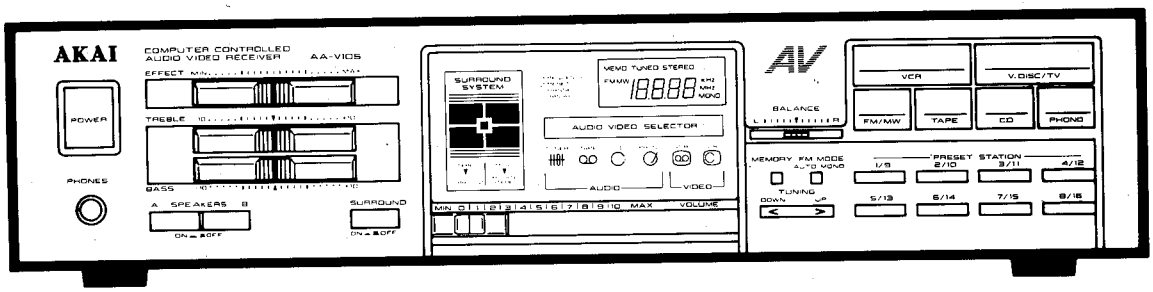
AKAI SERVICE MANUAL



AUDIO VIDEO RECEIVER

MODEL AA-V105/L

SPECIFICATIONS

Power amplifier section

Power output	
40 Hz to 20 kHz	35 W/0.3% at 8 ohms
Music power (Both channels)	200 W
Power bandwidth	
(IHF – 3dB, 8 ohms)	5Hz to 40 kHz (0.5%)
S/N	
PHONO	70 dB
CD, TAPE	90 dB
Residual noise (8 ohms)	0.5 mV
Channel separation	
(IHF, 1kHz)	55 dB
Damping factor	
(1kHz, 8 ohms)	30
Output	
Speaker	
A or B	8 to 16 ohms
A + B	16 ohms
SURROUND	8 ohms (Canada model not equipped)

Pre amplifier section

Input sensitivity/Impedance	
PHONO (MM)	2.0 mV/47 kohms
CD, TAPE	150 mV/47 kohms
V. DISC/VCR (Audio)	150 mV/47 kohms
V. DISC/VCR (Video)	1Vp-p/75 ohms
Output level/Impedance	
TAPE REC	150 mV/1 kohms
VCR (Audio)	150 mV/1 kohms
MONITOR/VCR (Video)	1Vp-p/1 kohms
Frequency response	
PHONO (RIAA)	+0.5 dB
AUX/TAPE	5 Hz to 80 kHz – 3 dB
Tone control	
BASS	± 8 dB (100 Hz)
TREBLE	± 8 dB (10 kHz)
Phono max. input level	
(1 kHz)	120 mV

FM Tuner section

Tuning frequency range	87.5 MHz to 108.0 MHz
Usable sensitivity	12.7 dBf
Quieting sensitivity (IHF)	19.2 dBf (Mono)/40.2 dBf (Stereo) (S/N = 50 dB)
Capture ratio	2.0 dB
Selectivity (400 kHz)	60 dB
Image rejection	50 dB
IF rejection	80 dB
Spurious rejection	80 dB
AM suppression	50 dB
Sub carrier suppression	55 dB
S/N (IHF)	70 dB (Mono)/60 dB (Stereo)
Harmonic distortion	0.2% (Mono)/0.4% (Stereo)
Stereo separation (1 kHz)	40 dB
Frequency response	30 Hz to 15 kHz ± 1.0 dB

AM Tuner section

	AM tuner section (MW for AA-V105L)	LW tuner section (for AA-V105L)
Tuning frequency range	531 kHz to 1,602 kHz	146 kHz to 353 kHz
Usable sensitivity (Loop antenna)	300 μ V/m	800 μ V/m
Selectivity	30 dB	40 dB
Image rejection	45 dB	45 dB
IF rejection	35 dB	35 dB
S/N	40 dB	35 dB
T.H.D	1.0%	2.0%

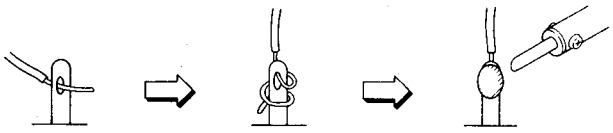
Power requirements	220V, 50 Hz for Europe except UK 240V, 50 Hz for UK & Australia 110V/120V/220V/240V, 50 Hz/60 Hz convertible for other countries
Dimensions	440(W) × 100(H) × 277(D) mm (17.3 × 3.9 × 10.9 inches)
Weight	5.4 kg (11.9 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locatoins.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 M ohms. but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be headphone jacks line-in-out jacks etc. more than 2.2 M ohms (ground terminals, microphone jacks).

PRECAUTION FOR THE LITHIUM BATTERY

The LITHIUM BATTERY employed for memory Back up has a explosive probability when the BATTERY itself is excessive heated.

IN CASE OF REPLACING: RESOLDER and SOLDER AS RECOMMENDED WAY.

[DANGER]

[RECOMMENDED WAY]

INFORMATION

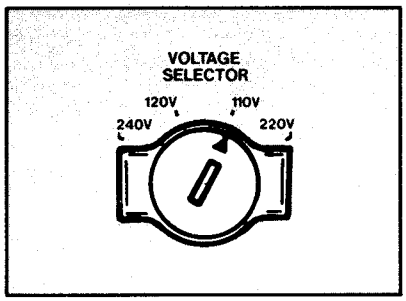
SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbols	Principal Destinations
[A]	USA
[B]	UK
[C]	Canada
[E]	Europe (except UK)
[J]	Japan
[S]	Australia
[V]	W. Germany only
[U]	Universal Area
[Y*]	Custom version

VOLTAGE CONVERSION ([U] Model only)

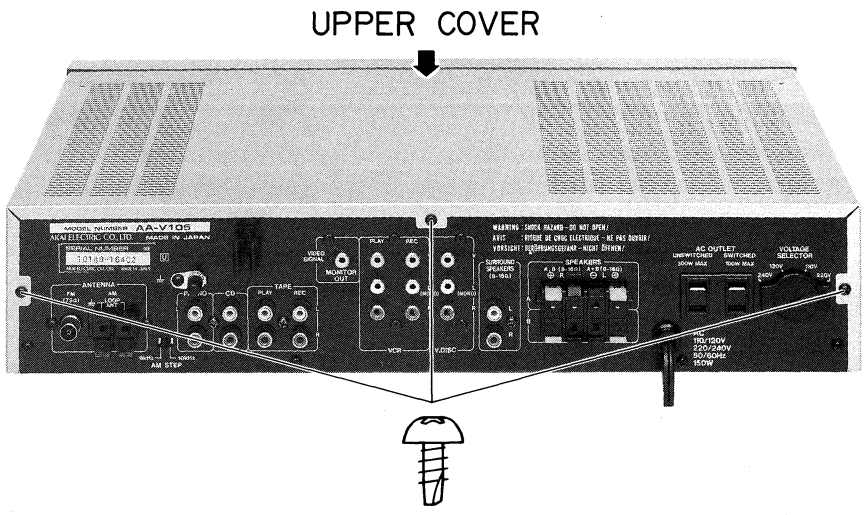
Befor connecting the power cord. SET the VOLTAGE SELECTOR located on the rear panel with a screwdriver so that the correct voltage is indicated.



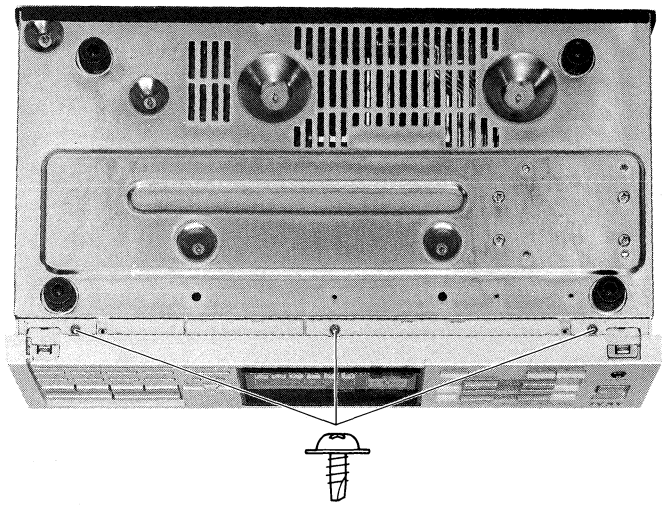
I. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs.
Reassemble in reverse order.

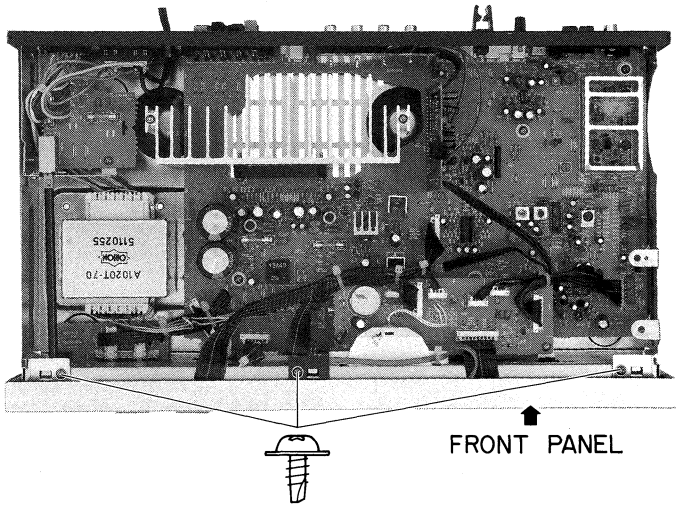
1 REMOVAL UPPER COVER



2 REMOVAL FRONT PANEL



3



II. CONTROLS

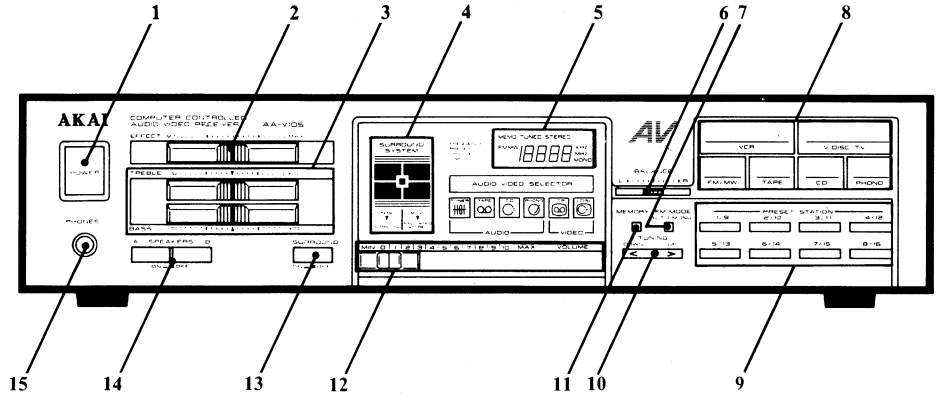


Fig. 2-1 Front View

1. **POWER switch**
   To turn ON and OFF the Akai AA-V105
2. **EFFECT Control**
   Use to control the level of the surround speakers.
3. **BASS and TREBLE controls**
   To adjust the bass and treble responses.
4. **Surround ON display**
   Lights when the SURROUND button is depressed.
5. **TUNER Display**
   LC display shows the Band, Frequency, STEREO, MONO, and MEMO
6. **BALANCE Control**
   To adjust the left and right channel balance
7. **FM MODE switch**
   Use this switch for Monaural reception of FM Stereo stations
8. **AV Source Selectors**
   Use these selectors to choose the audio or video source for playback and recording purposes
9. **CHANNEL (1-8/9-16) Buttons**
   Use these buttons to memorize and recall preset stations
10. **TUNING UP(▲) DOWN (▼) Control**
    Use it to tune in radio frequencies
11. **MEMORY button**
    Use it when memorizing radio stations with the preset station buttons
12. **VOLUME Control**
    To adjust the volume level
13. **SURROUND switch**
    Depress it to activate the SURROUND speaker system.
14. **SPEAKERS ON (▁)/OFF (▔) switches**
    To turn A and B speaker systems ON and OFF
15. **PHONES jack**
    For connection of headphones

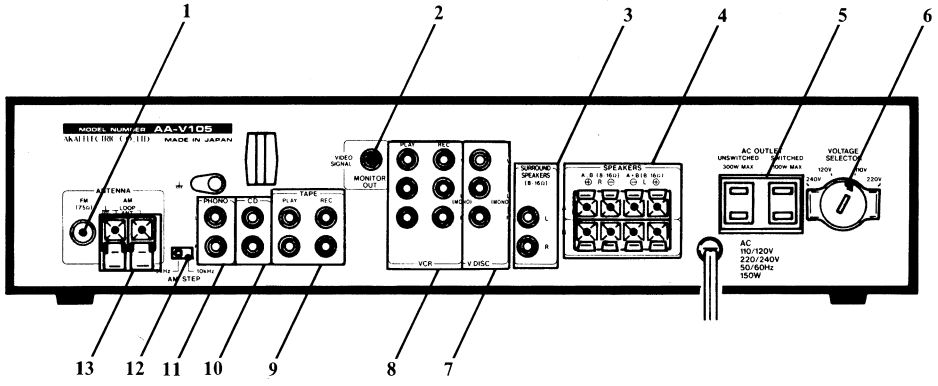


Fig. 2-2 Rear View

1. **FM Antenna jack**
   Connect the standard accessory T-shaped FM antenna to the FM (75 Ω) jack, and tack it up on a wall.
2. **MONITOR OUT jacks**
3. **SURROUND SPEAKERS Terminals**
   Insert the (optional) AE-S90 Surround Speaker input plugs into the Left and Right SURROUND SPEAKER terminals.
   Note
   Do not connect an amplifier or other speaker system to these terminals.
4. **SPEAKER Terminals**
   Be sure to connect:
   + wires to + terminals;
   − wires to − terminals;
   Left speaker to the Left (L) terminals; and Right speaker to the Right (R) terminals.
   Strip off 1 cm of vinyl covering from the ends of the speaker wires, then connect as follows:

   A Terminals
   With the speaker tab open (up), insert the speaker wire fully into the terminal. Push the speaker tab down so that the grip on the wire is firm. Pull the speaker wire gently to make sure that it is secure.
   B Terminals
   With the speaker tab open (down), insert the speaker wire fully into the terminal. Push the speaker tab back up so that the grip on the wire is firm. Pull the speaker wire gently to make sure that it is secure.
5. **AC OUTLETS (Not on some models)**
   Use these outlets for connection of the components connected to the Akai AA-V105.
   UNSWITCHED:
   The power to this AC outlet is maintained even when the Akai AA-V105 is turned off. Make sure that the power consumption of the component connected to this outlet does not exceed 300 watts.
   SWITCHED:
   The power to this AC outlet is cut when the Akai AA-V105 is turned off. Make sure that the total power consumption of the component connected to this outlet does not exceed 100 watts.

III. PRINCIPAL PARTS LOCATION

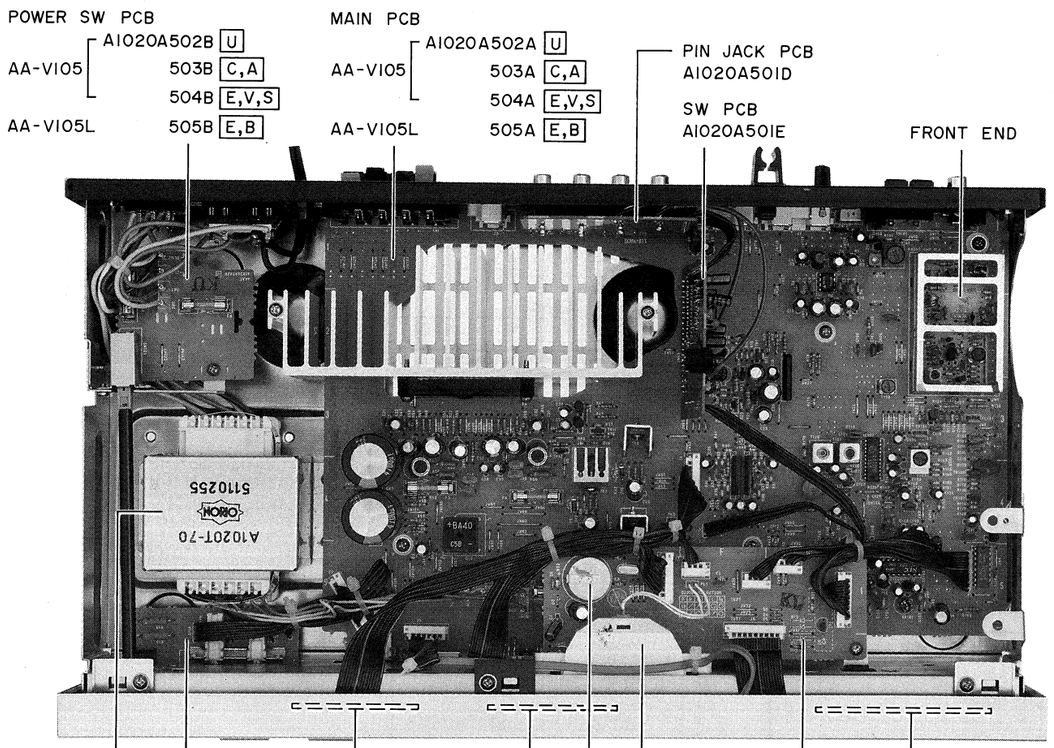


Fig. 3-1

IV. ADJUSTMENT

4-1. INSTRUMENT CONNECTIONS

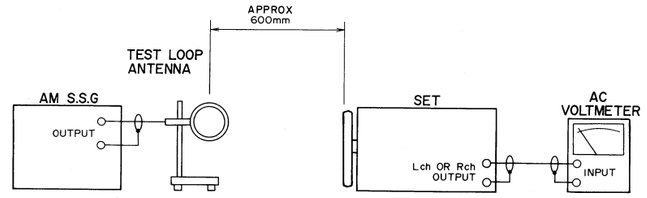


Fig. 4-1 Instrument Connections for AM (MW, LW) Section Adjustment

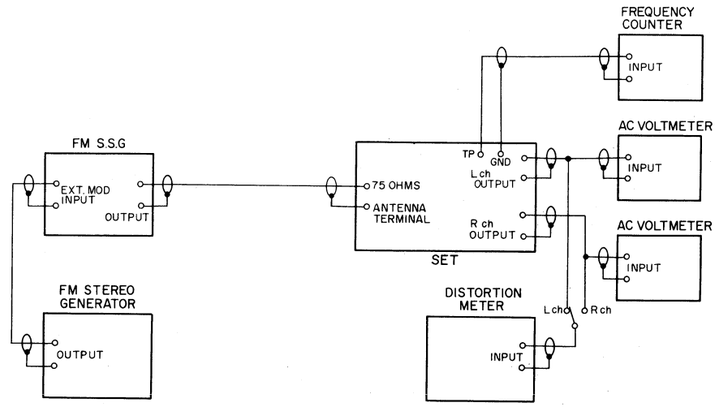
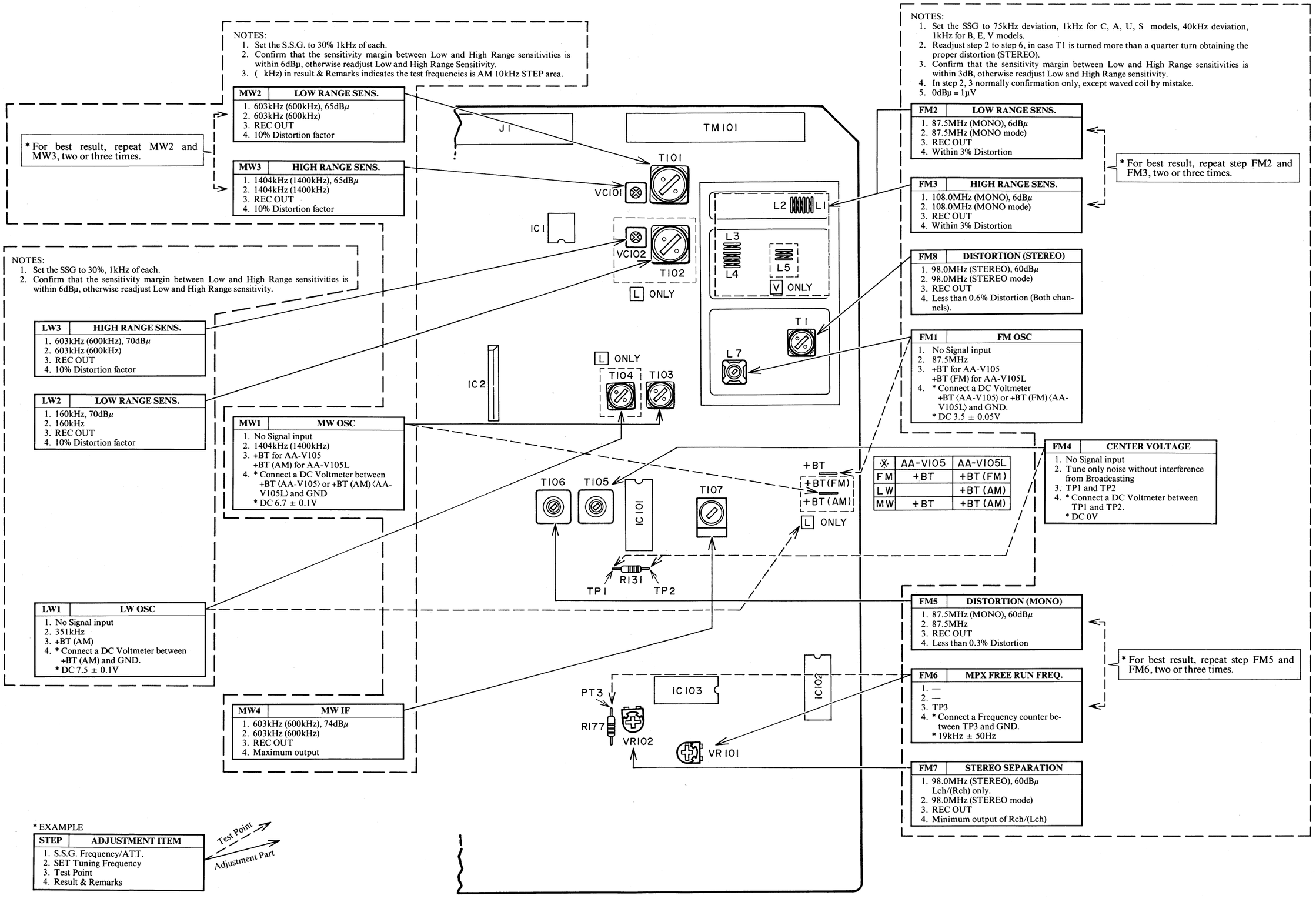


Fig. 4-2 Instrument Connection for FM Section Adjustment

4-2. MAIN PC BOARD Adjustment


NOTES:
1. Set the S.S.G. to 30% 1kHz of each.
2. Confirm that the sensitivity margin between Low and High Range sensitivities is within 6dBμ, otherwise readjust Low and High Range Sensitivity.
3. (kHz) in result & Remarks indicates the test frequencies is AM 10kHz STEP area.
MW2 LOW RANGE SENS.
1. 603kHz (600kHz), 65dBμ
2. 603kHz (600kHz)
3. REC OUT
4. 10% Distortion factor
* For best result, repeat MW2 and MW3, two or three times.
MW3 HIGH RANGE SENS.
1. 1404kHz (1400kHz), 65dBμ
2. 1404kHz (1400kHz)
3. REC OUT
4. 10% Distortion factor
NOTES:
1. Set the SSG to 30%, 1kHz of each.
2. Confirm that the sensitivity margin between Low and High Range sensitivities is within 6dBμ, otherwise readjust Low and High Range sensitivity.
LW3 HIGH RANGE SENS.
1. 603kHz (600kHz), 70dBμ
2. 603kHz (600kHz)
3. REC OUT
4. 10% Distortion factor
LW2 LOW RANGE SENS.
1. 160kHz, 70dBμ
2. 160kHz
3. REC OUT
4. 10% Distortion factor
MW1 MW OSC
1. No Signal input
2. 1404kHz (1400kHz)
3. +BT for AA-V105
+BT (AM) for AA-V105L
4. * Connect a DC Voltmeter between +BT (AA-V105) or +BT (AM) (AA-V105L) and GND
* DC 6.7 ± 0.1V
LW1 LW OSC
1. No Signal input
2. 351kHz
3. +BT (AM)
4. * Connect a DC Voltmeter between +BT (AM) and GND.
* DC 7.5 ± 0.1V
MW4 MW IF
1. 603kHz (600kHz), 74dBμ
2. 603kHz (600kHz)
3. REC OUT
4. Maximum output
J1
TM101
T101
VC101
IC1
VC102
T102
L ONLY
L2
L1
L3
L4
L5
V ONLY
T1
L7
IC2
L ONLY
T104
T103
T106
T105
IC101
T107
+BT
+BT(FM)
+BT(AM)
L ONLY
TP1
R131
TP2
PT3
IC103
IC102
R177
VR102
VR101
NOTES:
1. Set the SSG to 75kHz deviation, 1kHz for C, A, U, S models, 40kHz deviation, 1kHz for B, E, V models.
2. Readjust step 2 to step 6, in case T1 is turned more than a quarter turn obtaining the proper distortion (STEREO).
3. Confirm that the sensitivity margin between Low and High Range sensitivities is within 3dB, otherwise readjust Low and High Range sensitivity.
4. In step 2, 3 normally confirmation only, except waved coil by mistake.
5. 0dBμ = 1μV
FM2 LOW RANGE SENS.
1. 87.5MHz (MONO), 6dBμ
2. 87.5MHz (MONO mode)
3. REC OUT
4. Within 3% Distortion
* For best result, repeat step FM2 and FM3, two or three times.
FM3 HIGH RANGE SENS.
1. 108.0MHz (MONO), 6dBμ
2. 108.0MHz (MONO mode)
3. REC OUT
4. Within 3% Distortion
FM8 DISTORTION (STEREO)
1. 98.0MHz (STEREO), 60dBμ
2. 98.0MHz (STEREO mode)
3. REC OUT
4. Less than 0.6% Distortion (Both channels).
FM1 FM OSC
1. No Signal input
2. 87.5MHz
3. +BT for AA-V105
+BT (FM) for AA-V105L
4. * Connect a DC Voltmeter
+BT (AA-V105) or +BT (FM) (AA-V105L) and GND.
* DC 3.5 ± 0.05V
FM4 CENTER VOLTAGE
1. No Signal input
2. Tune only noise without interference from Broadcasting
3. TP1 and TP2
4. * Connect a DC Voltmeter between TP1 and TP2.
* DC 0V
※ AA-V105 AA-V105L
FM +BT +BT (FM)
LW +BT (AM)
MW +BT +BT (AM)
FM5 DISTORTION (MONO)
1. 87.5MHz (MONO), 60dBμ
2. 87.5MHz
3. REC OUT
4. Less than 0.3% Distortion
* For best result, repeat step FM5 and FM6, two or three times.
FM6 MPX FREE RUN FREQ.
1. —
2. —
3. TP3
4. * Connect a Frequency counter between TP3 and GND.
* 19kHz ± 50Hz
FM7 STEREO SEPARATION
1. 98.0MHz (STEREO), 60dBμ
Lch/(Rch) only.
2. 98.0MHz (STEREO mode)
3. REC OUT
4. Minimum output of Rch/(Lch)
* EXAMPLE
STEP ADJUSTMENT ITEM
1. S.S.G. Frequency/ATT.
2. SET Tuning Frequency
3. Test Point
4. Result & Remarks
Test Point
Adjustment Part

V. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PART NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20×03STL CMT
2-4	ZS-536488	BID20×08STL CMT
2-5	ZG-402895	SP CS ANGLE ADJUST

- SP (Service Parts) Classification
- A small "x" indicates that this part is not shown in the Photo or Illustration.
- This number corresponds with the individual parts index number in that figure.
- This number corresponds with the Figure Number.

b) PC Board

6. MAIN PC BOARD

REF. NO.	PART NO.	DESCRIPTION
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
6-C1B	EC-350949	C MMY V 223M 250DC [J]
6-C1C	EC-338397	C MMY V 223M 125AC [C,A]
6-X1	EI-318384	OSC X'TAL NC-18C

- Symbols for primary destination
  - [A]: AAL(U.S.A.) [S]: SAA(Australia)
  - [B]: BEAB(England) [U]: U/T(Universal Area)
  - [C]: CSA(Canada) [V]: VDE(W. Germany)
  - [E]: CEE(Europe) [Y]: Custom Version
  - [J]: JPN(Japan)
- SP (Service Parts) Classification
- These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS

AVERTISSEMENT

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

RECOMMENDED SPARE PARTS LIST

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

REF. NO.		PART NO.	DESCRIPTION
1	N	BT-363301	⚠ TRANS POWER A1020T-20 [A]
2	N	BT-363302	⚠ TRANS POWER A1020T-30 [C]
3	N	BT-363303	⚠ TRANS POWER A1020T-40 [E, V]
4	N	BT-363304	⚠ TRANS POWER A1020T-50 [B, S]
5	N	BT-363305	⚠ TRANS POWER A1020T-70 [U]
6		EC-359065	C S-FIX H CTC-6U-020 4.3-20
7	N	ED-365107	D LED SLP284C-50U GREEN
8		ED-200213	D SILICON DBA40C-K15 200/2.6A
9		ED-345555	D SILICON DBB10C 200/1.0A
10		ED-301911	D SILICON H DS448
11		ED-344280	D SILICON H GMA-01-FY2 F05
12		ED-349460	D VARACTER SVC321 A, B, C, D DOUBLE
13		ED-349448	D VARACTOR 1SV147
14		ED-346617	D ZENER H HZ12 C2
15		ED-306320	D ZENER H HZ15 2
16		ED-323836	D ZENER H HZ16 2
17		ED-329056	D ZENER H HZ22 2
18		ED-309069	D ZENER H HZ6 B2
19		ED-328700	D ZENER H HZ9 A2
20		EE-337976	ANT LOOP LA-200A
21		EF-359007	FUSE BET T 1.25A 250V [B]
22		EF-359086	FUSE BET T 4.00A 250V [B]
23		EF-359342	FUSE BET T 400MA 250V [B]
24		EF-602550	FUSE SEMKO T 1.25A 250V [E, V, S]
25		EF-690996	FUSE SEMKO T 4.00A 250V [E, V, S]
26		EF-668474	FUSE SEMKO T 400MA 250V [E, V, S]
27		EF-311839	FUSE TSC A 250V 1.60A [U]
28		EF-326613	FUSE TSC A 250V 5.00A [U]
29		EF-327103	FUSE TSC A 250V 500MA [U]
30		EF-323080	FUSE TSC 125V 3.15A [C, A]
31		EF-346139	FUSE TSC 125V 5.00A [C, A]
32		EF-309390	FUSE TSC 125V 500MA [C, A]
33	N	EI-366695	⚠ IC STK4172II
34		EI-361624	IC LA1265
35		EI-353852	IC LA7016
36		EI-337228	IC M5218L
37		EI-344764	IC M5218P-21
38		EI-347120	IC SN74LS145N
39		EI-349392	IC TC9164N
40	N	EI-363289	IC TC9172
41	N	EI-363290	IC TC9302F-011
42		EI-351849	IC μPC1235C
43		EI-344422	OSC X'TAL HC-18/U 7.200000MHZ
44	N	EL-362308	PL CORD 14.0V 80MA L=80
45	N	EM-361644	IND LCD 9419P
46		EO-337598	COIL VARI 2 25A-1353-01
47		EO-337599	COIL VARI 2 25A-1354-03 [L]
48		ER-353343	⚠ R FUSE ERD2FC S10 1/4W 100J
49		ER-318647	⚠ R FUSE ERD2FC S10 1/4W 4R7J
50		ES-349070	⚠ SW SELECTOR YKS11-0002 02-4 [U]
51	N	ES-363319	SW PUSH ESB-62 THROW
52	N	ES-363323	SW PUSH ESB-62731 2-06-02N
53		ES-337902	SW PUSH SDLD1P
54		ES-360115	SW SLIDE 00120262 01-02S [U]
55		ES-349367	SW TACT SKHHAK003A
56		ET-360687	⚠ TR 2SB1015 Y, GR
57		ET-349459	⚠ TR 2SD1406 O, Y, GR
58		ET-310148	⚠ TR 2SD612K E, F
59		ET-349449	TR FET 2SK161 O, Y
60		ET-352408	TR FET 2SK192A GR [L]
61		ET-337759	TR FET 2SK246 GR
62		ET-353899	TR 2SA1317 S, T, U
63		ET-308141	TR 2SC2603 G F05
64		ET-338410	TR 2SC2878 A, B [L]
65		ET-336869	TR 2SC2999 C, D
66		ET-349081	TR 2SC3383 S, T
67		ET-356437	TR 2SC930 D2, E, F
68		ET-328265	TR 2SC930 F
69		ET-338565	TR 2SD1302 R, S
70		EV-361673	R S-FIX H RH0615CN5J 3P 334
71		EV-356576	R S-FIX H RH0615CS3J 3P 472
72	N	EV-363321	VR SLIDE S2518 C203
73	N	EV-363322	VR SLIDE S2518 W105
74		EV-363320	VR SLIDE S2528 C104
75	N	EV-363324	VR SLIDE 60P2SVOP A104
76		EZ-358816	BATTERY LITHIUM BR2032-1HF

"NOTE" N: New Parts

1. PC BOARD BLOCK

REF. NO.	PART NO.	DESCRIPTION
1-1	BA-A1020A030A	PC MAIN BLK AA-V105 [U]
1-1A	BA-A1020A030B	PC MAIN BLK AA-V105 [C]
1-1B	BA-A1020A030G	PC MAIN BLK AA-V105 [A]
1-1C	BA-A1020A030C	PC MAIN BLK AA-V105 [E]
1-1D	BA-A1020A030D	PC MAIN BLK AA-V105 [V]
1-1E	BA-A1020A030F	PC MAIN BLK AA-V105 [S]
1-1F	BA-A1020A030E	PC MAIN BLK AA-V105L [E, B]
1-2	BA-A1020A050A	PC PRE BLK AA-V105 [U]
1-2A	BA-A1020A050B	PC PRE BLK AA-V105 [C, A]
1-2B	BA-A1020A050C	PC PRE BLK AA-V105 [E, S]
1-2C	BA-A1020A050D	PC PRE BLK AA-V105 [V]
1-2D	BA-A1020A050E	PC PRE BLK AA-V105L
1-3	BA-F0131A010A	PC FRONT END BLK FE31 [U, C, A, S, E, B] [EXCEPT V]
1-3A	BA-F0141A010A	PC FRONT END BLK FE41 [V]

NOTE:

(1) PC MAIN BLK consists of following PC BOARDS.
- MAIN PC BOARD
- POWER SW PC BOARD

(2) PC PRE BLK consists of following PC BOARDS.
- LCD PC BOARD
- TACT PC BOARD
- TONE PC BOARD
- PIN JACK PC BOARD
- SW PC BOARD
- LED PC BOARD
- PHONE JACK PC BOARD

2. MAIN PC BOARD

REF. NO.	PART NO.	DESCRIPTION
	MAIN PC BOARD	
2-IC1	EI-344764	IC M5218P-21
2-IC2	EI-353852	IC LA7016
2-IC3	EI-337228	IC M5218L
2-IC4	EI-366695	⚠IC STK4172II
2-IC101	EI-361624	IC LA1265
2-IC102	EI-363289	IC TC9172
2-IC103	EI-351849	IC μPC1235C
2-TR1 to 4	EI-308141	TR 2SC2603 G F05
2-TR5	ET-338565	TR 2SD1302 R, S
2-TR6	ET-353899	TR 2SA1317 S, T, U
2-TR7	ET-349459	⚠ TR 2SD1406 O, Y, GR
2-TR8	ET-360687	⚠ TR 2SB1015 Y, GR
2-TR9	ET-310148	⚠ TR 2SD612K E, F
2-TR10	ET-349459	⚠ TR 2SD1406 O, Y, GR
2-TR11	ET-308141	TR 2SC2603 G F05
2-TR12	ET-353899	TR 2SA1317 S, T, U
2-TR13, 14	ET-308141	⚠ TR 2SC2603 G F05
2-TR101	ET-356437	TR 2SC930 D2, E, F
2-TR102	ET-352408	TR FET 2SK192A GR [L]
2-TR103	ET-338410	TR 2SC2878 A, B [L]
2-TR104, 105	ET-308141	TR 2SC2603 G F05 [L]
2-TR106	ET-349081	TR 2SC3383 S, T
2-TR107	ET-337759	TR FET 2SK246 GR
2-TR108 to 112	ET-349081	TR 2SC3383 S, T
2-TR114	ET-353899	TR 2SA1317 S, T, U
2-TR115	ET-349081	TR 2SC3383 S, T
2-TR116	ET-353899	TR 2SA1317 S, T, U
2-D2, 3	ED-301911	D SILICON H DS448
2-D4, 5	ED-329056	D ZENER H HZ22 2
2-D6, 7	ED-301911	⚠ D SILICON H DS448
2-D8, 9	ED-306320	D ZENER H HZ15 2
2-D10	ED-200213	⚠ D SILICON DBA40C-K15 200/2.6A
2-D11	ED-309069	D ZENER H HZ6 B2
2-D12	ED-346616	D ZENER H HZ12 B3
2-D13	ED-345555	⚠ D SILICON DBB10C 200/1.0A
2-D14	ED-344280	D SILICON H GMA-01-FY2 F05
2-D15	ED-301911	D SILICON H DS448
2-D16	ED-323836	D ZENER H HZ16 2
2-D17, 18	ED-301911	D SILICON H DS448
2-D101	ED-349460	D VARACTER SVC321 A, B, C, D DOUBLE
2-D102, 103	ED-344280	D SILICON H GMA-01-FY2 F05 [L]
2-D104	ED-349460	D VARACTER SVC321 A, B, C, D DOUBLE
2-D105 to 109	ED-344280	D SILICON H GMA-01-FY2 F05 [L]
2-D110	ED-328700	D ZENER H HZ9 A2
2-D111, 112	ED-344280	D SILICON H GMA-01-FY2 F05
2-SW1	ES-363323	SW PUSH ESB-62731 2-06-02N
2-SW101	ES-360115	SW SLIDE 00120262 01-02S (U)
2-VR1	EV-363324	VR-SLIDE 60P2SV0P A104
2-VR101	EV-356576	R S-FIX H RH0615CS3J 3P 472
2-VR102	EV-361673	R S-FIX H RH0615CN5J 3P 334
2-FL101	EH-355568	FILTER CE SFE10.7MS2GY-A [EXCEPT V]
2-FL101A	EH-338338	FILTER CE SFE10.7MS3GK-A [V]
2-FL102	EH-355568	FILTER CE SFE10.7MS2GY-A
2-FL103	EH-363344	FILTER LC LP 123-5010-03 [V]
2-L4	EO-337880	COIL FIX 2 202AK-018 2R2K
2-L101	EO-337523	COIL FIX 1 L-8 223J
2-T101	EO-337598	COIL VARI 2 25A-1353-01
2-T102	EO-337599	COIL VARI 2 25A-1354-03 [L]
2-T103	E-363279	COIL OSC 2 A7NRS-9857 × 150.0UH
2-T104	EO-352089	COIL OSC 2 7BRS-9098 × 580.0UH [L]
2-T105	EO-363291	COIL DET 2 78-1128-01
2-T106	EO-361630	COIL DET 2 78-1126-02
2-T107	EO-356732	COIL IFT BCFLZ-450A
2-FR1, 2	ER-353343	⚠ R FUSE ERD2FC S10 1/4W 100J
2-FR3	ER-318647	⚠ R FUSE ERD2FC S10 1/4W 4R7J
2-FR4	ER-353343	⚠ R FUSE ERD2FC S10 1/4W 100J
2-R12, 13	ER-322591	⚠ R CB H S10 FS RDS 1/4W 101J
2-R14, 21	ER-551610	R CB H RD 1/2W 151J
2-R50, 51	ER-324480	⚠ R CB H S10 FS RDS 1/4W 470J
2-R52	ER-322591	⚠ R CB H S10 FS RDS 1/4W 101J
2-R55, 56	ER-311685	⚠ R CB H S15 FS RDS 1/2W 4R7J
2-R67	ER-322331	⚠ R CB H S10 FS RDS 1/4W 821J
2-R75	ER-333085	⚠ R OMF H S20 FS 2W 330J
2-R78, 79	ER-322591	⚠ R CB H S10 FS RDS 1/4W 101J
2-R118	ER-328067	⚠ R CB H S10 FS RDS 1/4W 331J
2-R124	ER-327710	⚠ R CB H S10 FS RDS 1/4W 151J
2-R125	ER-322591	⚠ R CB H S10 FS RDS 1/4W 101J
2-R131	ER-333401	⚠ R CB H S10 FS RDS 1/4W 333J
2-R169	ER-322591	⚠ R CB H S10 FS RDS 1/4W 101J
2-R175	ER-324185	⚠ R CB H S10 FS RDS 1/4W 221J
2-R177	ER-333422	⚠ R CB H S10 FS RDS 1/4W 563J
2-VC101, 102	EC-359065	C S-FIX H CTC-6U-020 4.3-20
2-C47, 48	EC-361665	C EC V CUT 472M 50.0DC
2-C49	EC-326583	⚠ C MMY V CUT CF921 473K 400DC
2-C52	EC-316188	C EC V CUT SM 102M 25.0DC
2-C107	EC-360717	C PP V S05 CQMFS92 471J 50DC [EXCEPT L]
2-C107A	EC-353044	C PP V F05 PP 511J 50DC (L)
2-C108	EC-355169	C PP V S05 CQMFS92 271J 50DC (L)
2-C112	EC-347591	⚠ C MMY V F05 MMH63 474M 100DC
2-C141	EC-347093	C PP V F05 PP 331J 50DC
2-C145	EC-353044	C PP V F05 PP 511J 50DC [EXCEPT C, A]
2-C145A	EC-351998	C PP V F05 PP 821J 50DC [C, A]
2-C148	EC-356598	C PP V F05 PP 302J 50DC
2-C150, 152	EC-347471	C PP V F05 PP 471J 50DC
2-J1, 2	EJ-336905	PIN J AJC-035-ACB P 4P
2-J3	EJ-337424	PIN J AJC-034-ABB P 2P
2-TM1	EJ-349061	TERMINAL PUSH YKD21-0025 P 8P
2-TM101	EJ-359031	TERMINAL LEVER YKD31-0215 P 2P
2-1	BA-F0131A010A	PC FRONT END BLK FE 31 [U, C, A, S, E, B] [EXCEPT V]
2-1A	BA-F0141A010A	PC FRONT END BLK FE 41 [V]
	ASSEMBLY BLOCK	
2-F3	EF-326613	⚠ FUSE TSC A 250V 5.00A [U]
2-F3A	EF-346139	⚠ FUSE TSC 125V 5.00A [C, A]
2-F3B	EF-690996	⚠ FUSE SEMKO T 4.00A 250V [E, V, S]
2-F3C	EF-359086	⚠ FUSE BET T 4.00A 250V [B]
2-F4	EF-326613	⚠ FUSE TSC A 250V 5.00A [U]
2-F4A	EF-346139	⚠ FUSE TSC 125V 5.00A [C, A]
2-F4B	EF-690996	⚠ FUSE SEMKO T 4.00A 250V [E, V, S]
2-F4C	EF-359086	⚠ FUSE BET T 4.00A 250V [B]
2-F5	EF-327103	⚠ FUSE TSC A 250V 500MA [U]
2-F5A	EF-309390	⚠ FUSE TSC 125V 500MA [C, A]
2-F5B	EF-668474	⚠ FUSE SEMKO T 400MA 250V [E, V, S]
2-F5C	EF-359342	⚠ FUSE BET T 400MA 250V [B]

3. FRONT END PC BOARD

REF. NO.	PART NO.	DESCRIPTION
3-TR1	ET-349449	TR FET 2SK161 O, Y
3-TR2	ET-336869	TR 2SC2999 C, D
3-TR3	ET-328265	TR 2SC930 F
3-TR4	ET-349449	TR FET 2SK161 O, Y
3-D1 to 4	ED-349448	D VARACTOR 1SV147
3-L1	EO-349461	COIL FIX 2 LINK
3-L2	EO-349462	COIL FIX 2 U147
3-L3	EO-349461	COIL FIX 2 LINK
3-L4, 5	EO-349462	COIL FIX 2 U147
3-L6	EO-359056	COIL FIX 1 LAL03NA 2R2M
3-L7	EO-353687	COIL OSC 2 E525HN-110003
3-T1	EO-337640	COIL IFT 119AC-15533 × 10.7MHZ

4. LCD PC BOARD

REF. NO.	PART NO.	DESCRIPTION
	LCD PC BOARD	
4-IC1	EI-363290	IC TC9302F-011
4-TR1	ET-353899	TR 2SA1317 S, T, U [U]
4-D1 to 6	ED-344280	D SILICON H GMA-01-FY2 F05
4-D10 to 13	ED-301911	D SILICON H DS448
4-LCD1	EM-361644	IND LCD 9419P
4-X1	EI-344422	OSC X'TAL HC-18/U 7.200000MHZ
4-PL1	EL-362308	PL CORD 14.0V 80MA L=80
	ASSEMBLY BLOCK	
4-BT1	EZ-358816	BATTERY LITHIUM BR2032-1HF

5. TACT PC BOARD

REF. NO.	PART NO.	DESCRIPTION
5-SW1 to 18	ES-349367	SW TACT SKHHAK003A
5-VR1	EV-363322	VR SLIDE S2518 W105

6. TONE PC BOARD

REF. NO.	PART NO.	DESCRIPTION
6-IC2	EI-337228	IC M5218L
6-VR2, 3	EV-363320	VR SLIDE S2528 C104
6-VR4	EV-363321	VR SLIDE S2518 C203

7. PIN JACK PC BOARD

REF. NO.	PART NO.	DESCRIPTION
7-J7	EJ-358561	PIN J LAP0020-0015R 10P

8. SW PC BOARD

REF. NO.	PART NO.	DESCRIPTION
8-IC3	EI-349392	IC TC9164N
8-IC4	EI-337228	IC M5218L

9. LED PC BOARD

REF. NO.	PART NO.	DESCRIPTION
9-IC5	EI-347120	IC SN74LS145N
9-D14 to 20	ED-365107	D LED SLP284C-50U GREEN

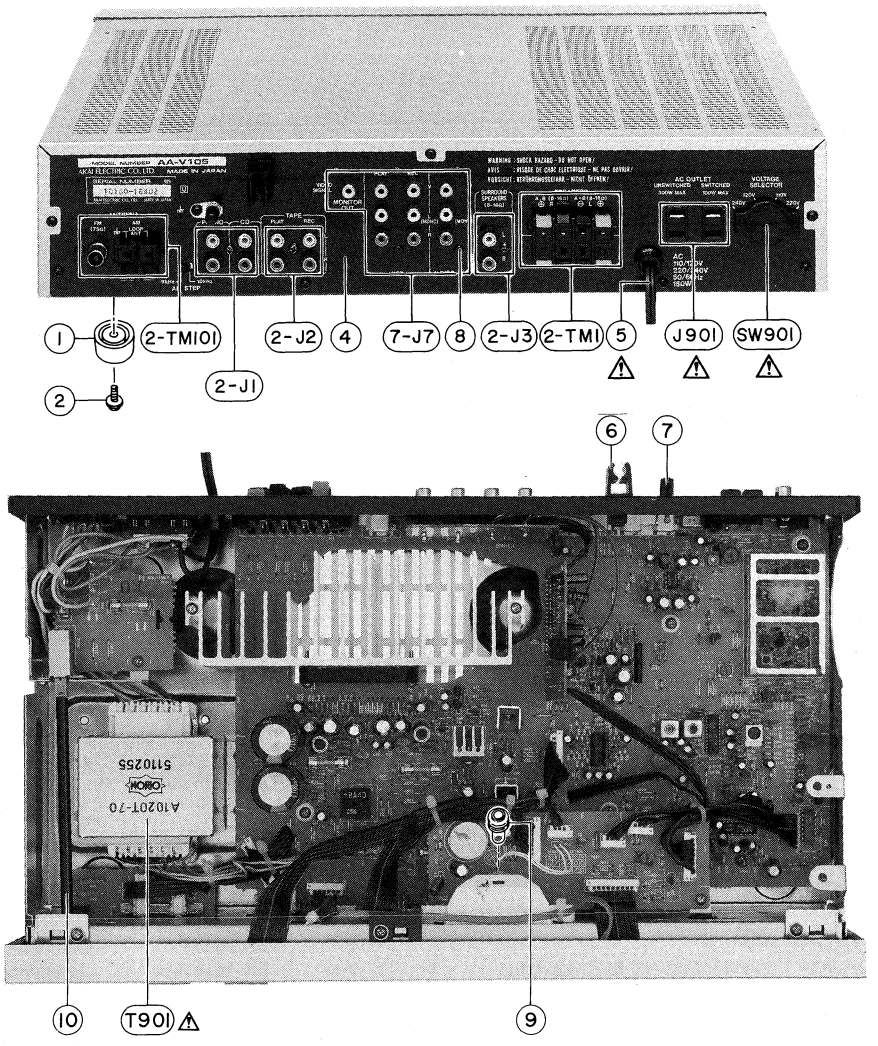
10. PHONE JACK PC BOARD

REF. NO.	PART NO.	DESCRIPTION
10-SW19	ES-363319	SW PUSH ESB-62 W THROW
10-R19	ER-358910	⚠ R OMF H S15 FS 2W 181J
10-J11	EJ-355012	PHONE J 3P HLJ0541-010 6.3

11. POWER SW PC BOARD

REF. NO.	PART NO.	DESCRIPTION
	POWER SW PC BOARD	
11-C201	EC-320548	⚠ C CE V F 103Z 250AC [U]
11-C201A	EC-338411	⚠ C CE V FZ 103P 400AC [C, A]
11-C201B	EC-338496	⚠ C CE V FZ 472P 400AC [E, V, B, S]
11-R201	ER-356573	⚠ R SD ANTI-STATIC 1/2W 225K [C, A]
11-SW201	ES-337902	⚠ SW PUSH SDLD1P
	ASSEMBLY BLOCK	
11-F1	EF-311839	⚠ FUSE TSC A 250V 1.60A [U]
11-F1A	EF-323080	⚠ FUSE TSC 125V 3.15A [C, A]
11-F1B	EF-602550	⚠ FUSE SEMKO T 1.25A 250V [E, V, S]
11-F1C	EF-359007	⚠ FUSE BET T 1.25A 250V [B]
11-F2	EF-311839	⚠ FUSE TSC A 250V 1.60A [U]

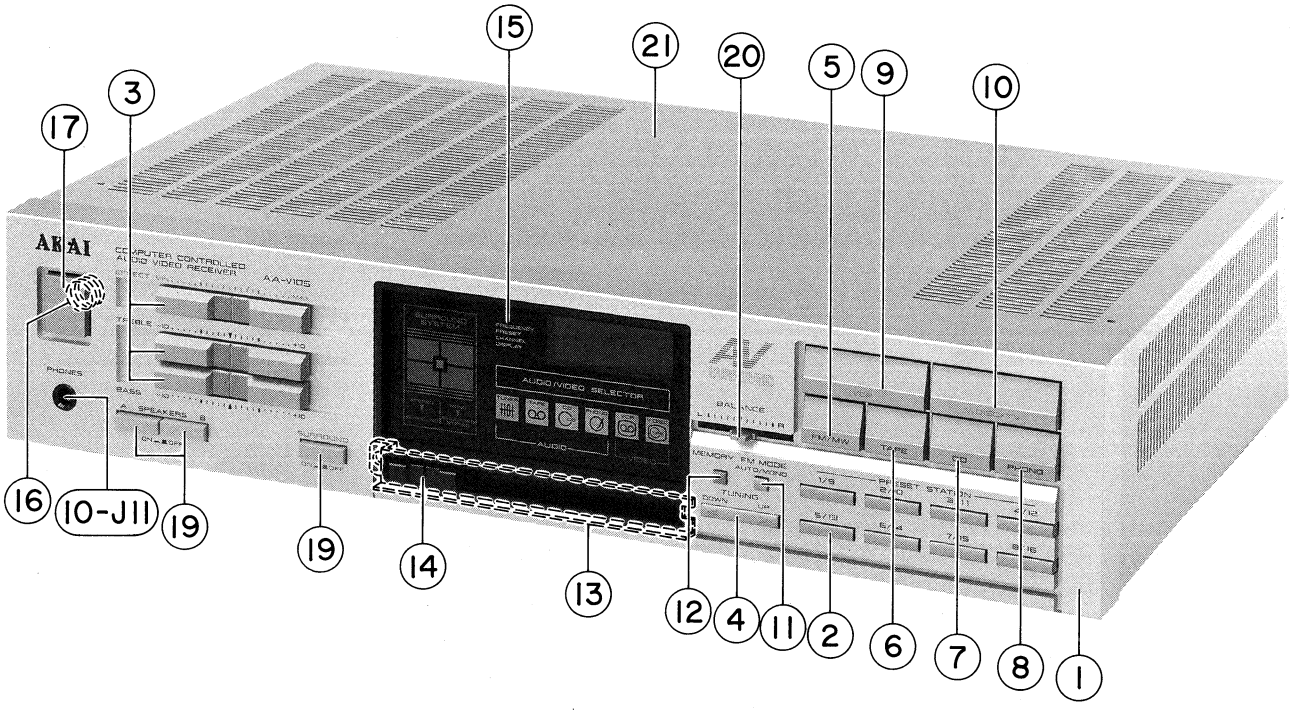
ASSEMBLY BLOCK



12. ASSEMBLY BLOCK

REF. NO.	PART NO.	DESCRIPTION
	ASSEMBLY BLOCK	
12-1	SA-332850	ROUND FOOT
12-2	ZS-331567	T2BR30 x 08STL CMT CO80 [FOOT FIX]
12-3x	ZS-301398	ST BID40 x 08STL CMT [TRANS POWER FIX]
12-4	SP-361861A	PANEL REAR AA-V105 [U]
12-4A	SP-361861G	PANEL REAR AA-V105 [C]
12-4B	SP-361861D	PANEL REAR AA-V105 [A]
12-4C	SP-361861B	PANEL REAR AA-V105 [E, V]
12-4D	SP-361861C	PANEL REAR AA-V105 [S]
12-4E	SP-361861E	PANEL REAR AA-V105L [E]
12-4F	SP-361861F	PANEL REAR AA-V105L [B]
12-5	EW-363841	⚠ AC CORD 200 KP700VFF B070 A U/T [U]
12-5A	EW-363815	⚠ AC CORD 200 KP-8WSPT2 B070 A UC [C, A]
12-5B	EW-363852	⚠ AC CORD 200 KP419LTCE B150 A EV [E, V]
12-5C	EW-363879	⚠ AC CORD 200 KP560LTSA B150 A S [S]
12-5D	EW-363865	⚠ AC CORD 200 LTBS B150 A B [B]
12-6	SZ-362273	HOLDER ANTENNA [2]
12-7	EJ-329610	TERMINAL W/SCREW UB-0067 L 1P
12-8	ZW-698308	RV NYL30 x 055 BL
12-9	EZ-361808	HOLDER LAMP EQ-300-42101A [WHITE]
12-10	MZ-356476	JOINT POWER
12-T901	BT-363305	⚠ TRANS POWER A1020T-70 [U]
12-T901A	BT-363302	⚠ TRANS POWER A1020T-30 [C]
12-T901B	BT-363301	⚠ TRANS POWER A1020T-20 [A]
12-T901C	BT-363303	⚠ TRANS POWER A1020T-40 [E, V]
12-T901D	BT-363304	⚠ TRANS POWER A1020T-50 [B, S]
12-SW901	ES-349070	⚠ SW SELECTOR YKS11-0002 02-4 [U]
12-J901	EJ-343362	⚠ SOCKET OUTLET S2T732T174 JUC 2 x 2P [U]
12-J901A	EJ-349837	⚠ SOCKET OUTLET S2T732T124 JUC [C, A]
	MAIN PC BOARD	
2-J1, J2	EJ-336905	PIN J AJC-035-ACB P 4P
2-J3	EJ-337424	PIN J AJC-034-ABB P 2P
2-TM1	EJ-349061	TERMINAL PUSH YKD21-0025 P 8P
2-TM101	EJ-359031	TERMINAL LEVER YKD31-0215 P 2P
	PIN JACK PC BOARD	
7-J7	JEJ-358561	PIN J LA P0020-0015R 10P

FINAL ASSEMBLY BLOCK



13. FINAL ASSEMBLY BLOCK

REF. NO.	PART NO.	DESCRIPTION
	PANEL FRONT BLOCK	
13-1	BD-A1020A060A	PANEL FRONT BLK AA-V105 [U, A, E, V, S]
13-1A	BD-A1020A060E	PANEL FRONT BLK AA-V105 [C]
13-1B	BD-A1020A060B	PANEL FRONT BLK AA-V105L [E, B]
13-1-B	BD-A1020A060C	PANEL FRONT BLK AA-V105-B [U, A, E, V, S]
13-1A-B	BD-A1020A060F	PANEL FRONT BLK AA-V105-B [C]
13-1B-B	BD-A1020A060D	PANEL FRONT BLK AA-V105 [E, B]-B
13-2	SK-361871A	KNOB PRESET (PRESET STATION)
13-2-B	SK-361871B	KNOB PRESET-B (PRESET STATION)
13-3	SK-361874A	KNOB SLIDE (BASS, TREBLE, EFECT)
13-3-B	SK-361874B	KNOB SLIDE-B (BASS, TREBLE, EFECT)
13-4	SK-361872A	KNOB TUNING
13-4-B	SK-361872B	KNOB TUNING-B
13-5	SK-361870A	KNOB SELECTOR (A) FM/MW [EXCEPT L]
13-5A	SK-361870F	KNOB SELECTOR (A) FM/MW/LW [L]
13-5-B	SK-361870B	KNOB SELECTOR (A)-B FM/MW [EXCEPT L]
13-5A-B	SK-361870K	KNOB SELECTOR (A)-B FM/MW/LW [L]
13-6	SK-361870C	KNOB SELECTOR (A) TAPE
13-6-B	SK-361870G	KNOB SELECTOR (A)-B TAPE
13-7	SK-361870D	KNOB SELECTOR (A) CD
13-7-B	SK-361870H	KNOB SELECTOR (A)-B CD
13-8	SK-361870E	KNOB SELECTOR (A) PHONO
13-8-B	SK-361870J	KNOB SELECTOR (A)-B PHONO
13-9	SK-361876A	KNOB SELECTOR (B) VCR
13-9-B	SK-361876B	KNOB SELECTOR (B)-B VCR
13-10	SK-361876C	KNOB SELECTOR (B) V.DISC/TV
13-10-B	SK-361876D	KNOB SELECTOR (B)-B V.DISC/TV
13-11	SK-361873B	KNOB (B) (FM MODE)
13-11-B	SK-361873C	KNOB (B)-B (FM MODE)
13-12	SK-361873A	KNOB (A) (MEMORY)
13-13	SZ-361862	GUIDE VR KNOB
13-14	SK-361869	KNOB VR
13-15	SZ-361864	IND PLATE [EXCEPT C, A]
13-15A	SZ-361864B	IND PLATE (C) [C, A]
13-16	ZG-355238	SP PUSH POWER
13-17	SK-343017C	KNOB POWER (2)
13-17-B	SK-343017F	KNOB POWER-B
	FINAL ASSEMBLY BLOCK	
13-18x	ZS-331567	T2BR30 × 08STL CMT CO80 (PANEL FRONT FIX)
13-19	SK-358479C	KNOB (F-3) (SPEAKER, A, B, SURROUND)
13-19-B	SK-358479A	KNOB (F-1) (SPEAKER, A, B, SURROUND)
13-20	SK-358477B	KNOB (C-2) (BALANCE)
13-20-B	SK-358477A	KNOB (C-1) (BALANCE)
13-21	SP-349925A	COVER UPPER
13-21-B	SP-349925C	COVER UPPER-B
13-22x	EJ-352118	SOCKET COAX PAL B2-714P-900
13-23x	EE-359265	ANT LOOP LA-200A-A
	PHONE JACK PC BOARD	
10-J11	EJ-355012	PHONE J 3P HLJ0541-010 6.3

SYMBOL FOR COLOR VARIATION

NON : STANDARD COLOR
-B : BLACK

NOTE: PANEL FRONT BLK includes 13-2 to 13-7.

INDEX

AA-V105/L

PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.	PART NO.	REF. NO.
BA-A1020A030A	1-1	ED-345555	2-D13	ER-311685	2-R55	ET-353899	4-TR1
BA-A1020A030B	1-1A	ED-346616	2-D12	ER-311685	2-R56	ET-356437	2-TR101
BA-A1020A030C	1-1C	ED-349448	3-D1	ER-318647	2-FR3	ET-360687	2-TR8
BA-A1020A030D	1-1D	ED-349448	3-D2	ER-322331	2-R67	EV-356576	2-VR101
BA-A1020A030E	1-1F	ED-349448	3-D3	ER-322591	2-R12	EV-361673	2-VR102
BA-A1020A030F	1-1E	ED-349448	3-D4	ER-322591	2-R13	EV-363320	6-VR2
BA-A1020A030G	1-1B	ED-349460	2-D101	ER-322591	2-R52	EV-363320	6-VR3
BA-A1020A050A	1-2	ED-349460	2-D104	ER-322591	2-R78	EV-363321	6-VR4
BA-A1020A050B	1-2A	ED-365107	9-D14	ER-322591	2-R79	EV-363322	5-VR1
BA-A1020A050C	1-2B	ED-365107	9-D15	ER-322591	2-R125	EV-363324	2-VR1
BA-A1020A050D	1-2C	ED-365107	9-D16	ER-322591	2-R169	EW-363815	12-5A
BA-A1020A050E	1-2D	ED-365107	9-D17	ER-324185	2-R175	EW-363841	12-5
BA-F0131A010A	1-3	ED-365107	9-D18	ER-324480	2-R50	EW-363852	12-5B
BA-F0131A010A	2-1	ED-365107	9-D19	ER-324480	2-R51	EW-363865	12-5D
BA-F0141A010A	1-3A	ED-365107	9-D20	ER-327710	2-R124	EW-363879	12-5C
BA-F0141A010A	2-1A	EE-359265	13-23x	ER-328067	2-R118	EZ-358816	4-BT1
BD-A1020A060A	13-1	EF-309390	2-F5A	ER-333085	2-R75	EZ-361808	12-9
BD-A1020A060B	13-1B	EF-311839	11-F1	ER-333401	2-R131	MZ-356476	12-10
BD-A1020A060C	13-1-B	EF-311839	11-F2	ER-333422	2-R177	SA-332850	12-1
BD-A1020A060D	13-1B-B	EF-323080	11-F1A	ER-353343	2-FR1	SK-343017C	13-17
BD-A1020A060E	13-1A	EF-326613	2-F3	ER-353343	2-FR2	SK-343017F	13-17-B
BD-A1020A060F	13-1A-B	EF-326613	2-F4	ER-353343	2-FR4	SK-358477A	13-20-B
BT-363301	12-T901B	EF-327103	2-F5	ER-356573	11-R201	SK-358477B	13-20
BT-363302	12-T901A	EF-346139	2-F3A	ER-358910	10-R19	SK-358479A	13-19-B
BT-363303	12-T901C	EF-346139	2-F4A	ER-551610	2-R21	SK-358479C	13-19
BT-363304	12-T901D	EF-359007	11-F1C	ER-551610	2-R14	SK-361869	13-14
BT-363305	12-T901	EF-359086	2-F3C	ES-337902	11-SW201	SK-361870A	13-5
EC-316188	2-C52	EF-359086	2-F4C	ES-349070	12-SW901	SK-361870B	13-5-B
EC-320548	11-C201	EF-359342	2-F5C	ES-349367	5-SW8	SK-361870C	13-6
EC-326583	2-C49	EF-602550	11-F1B	ES-349367	5-SW1	SK-361870D	13-7
EC-338411	11-C201A	EF-668474	2-F5B	ES-349367	5-SW2	SK-361870E	13-8
EC-338496	11-C201B	EF-690996	2-F3B	ES-349367	5-SW3	SK-361870F	13-5A
EC-347093	2-C141	EF-690996	2-F4B	ES-349367	5-SW4	SK-361870G	13-6-B
EC-347471	2-C150	EH-338338	2-FL101A	ES-349367	5-SW5	SK-361870H	13-7-B
EC-347471	2-C152	EH-355568	2-FL101	ES-349367	5-SW6	SK-361870J	13-8-B
EC-347591	2-C112	EH-355568	2-FL102	ES-349367	5-SW7	SK-361870K	13-5A-B
EC-351998	2-C145A	EH-363344	2-FL103	ES-349367	5-SW9	SK-361871A	13-2
EC-353044	2-C107A	EI-337228	2-IC3	ES-349367	5-SW10	SK-361871B	13-2-B
EC-353044	2-C145	EI-337228	6-IC2	ES-349367	5-SW11	SK-361872A	13-4
EC-355169	2-C108	EI-337228	8-IC4	ES-349367	5-SW13	SK-361872B	13-4-B
EC-356598	2-C148	EI-344422	4-X1	ES-349367	5-SW14	SK-361873A	13-12
EC-359065	2-VC101	EI-344764	2-IC1	ES-349367	5-SW15	SK-361873B	13-11
EC-359065	2-VC102	EI-347120	9-IC5	ES-349367	5-SW17	SK-361873C	13-11-B
EC-360717	2-C107	EI-349392	8-IC3	ES-349367	5-SW18	SK-361874A	13-3
EC-361665	2-C47	EI-351849	2-IC103	ES-349367	5-SW12	SK-361874B	13-3-B
EC-361665	2-C48	EI-353852	2-IC2	ES-349367	5-SW16	SK-361876A	13-9
ED-200213	2-D10	EI-361624	2-IC101	ES-360115	2-SW101	SK-361876B	13-9-B
ED-301911	2-D2	EI-363289	2-IC102	ES-363319	10-SW19	SK-361876C	13-10
ED-301911	2-D3	EI-363290	4-IC1	ES-363323	2-SW1	SK-361876D	13-10-B
ED-301911	2-D6	EI-366695	2-IC4	ET-308141	2-TR1	SP-349925A	13-21
ED-301911	2-D7	EJ-329610	12-7	ET-308141	2-TR2	SP-349925C	13-21-B
ED-301911	2-D15	EJ-336905	2-J1	ET-308141	2-TR3	SP-361861A	12-4
ED-301911	2-D17	EJ-336905	2-J2	ET-308141	2-TR4	SP-361861B	12-4C
ED-301911	2-D18	EJ-337424	2-J3	ET-308141	2-TR11	SP-361861C	12-4D
ED-301911	4-D10	EJ-343362	12-J901	ET-308141	2-TR13	SP-361861D	12-4B
ED-301911	4-D11	EJ-349061	2-TM1	ET-308141	2-TR14	SP-361861E	12-4E
ED-301911	4-D13	EJ-349837	12-J901A	ET-308141	2-TR104	SP-361861F	12-4F
ED-306320	2-D8	EJ-352118	13-22x	ET-308141	2-TR105	SP-361861G	12-4A
ED-306320	2-D9	EJ-355012	10-J11	ET-310148	2-TR9	SZ-361862	13-13
ED-309069	2-D11	EJ-358561	7-J7	ET-328265	3-TR3	SZ-361864	13-15
ED-323836	2-D16	EJ-359031	2-TM101	ET-336869	3-TR2	SZ-361864B	13-15A
ED-328700	2-D110	EL-362308	4-PL1	ET-337759	2-TR107	SZ-362273	12-6
ED-329056	2-D4	EM-361644	4-LCD1	ET-338410	2-TR103	ZG-355238	13-16
ED-329056	2-D5	EO-337523	2-L101	ET-338565	2-TR5	ZS-301398	12-3x
ED-344280	2-D14	EO-337598	2-T101	ET-349081	2-TR106	ZS-331567	12-2
ED-344280	2-D102	EO-337599	2-T102	ET-349081	2-TR109	ZS-331567	13-18x
ED-344280	2-D103	EO-337640	3-T1	ET-349081	2-TR110	ZW-698308	12-8
ED-344280	2-D105	EO-337880	2-L4	ET-349081	2-TR111		
ED-344280	2-D106	EO-349461	3-L1	ET-349081	2-TR112		
ED-344280	2-D107	EO-349461	3-L3	ET-349081	2-TR115		
ED-344280	2-D108	EO-349462	3-L2	ET-349081	2-TR108		
ED-344280	2-D109	EO-349462	3-L4	ET-349449	3-TR1		
ED-344280	2-D111	EO-349462	3-L5	ET-349449	3-TR4		
ED-344280	2-D112	EO-352089	2-T104	ET-349459	2-TR7		
ED-344280	4-D1	EO-353687	3-L7	ET-349459	2-TR10		
ED-344280	4-D2	EO-356732	2-2T107	ET-352408	2-TR102		
ED-344280	4-D3	EO-359056	3-L6	ET-353899	2-TR6		
ED-344280	4-D4	EO-361630	2-T106	ET-353899	2-TR12		
ED-344280	4-D5	EO-363279	2-T103	ET-353899	2-TR114		
ED-344280	4-D6	EO-363291	2-T105	ET-353899	2-TR116		

ABBREVIATIONS FOR SERVICE MANUAL (RECEIVER)

MODEL AA-V105/L

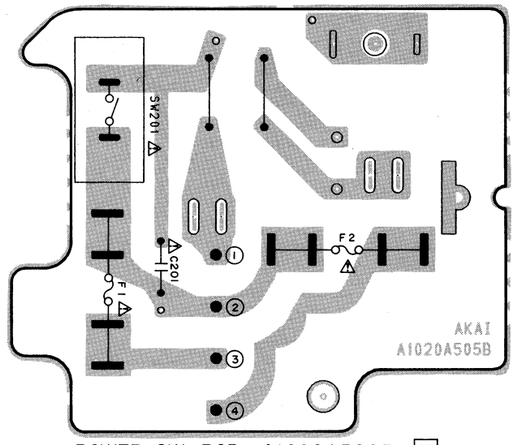
ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AFC	Auto Frequency Control	MEMO	MEMOry
AGC	Auto Gain Control	MI-COM	MIcro-COMputer
ALC	Auto Level Control	MIN	MINimum
AM	Amplitude Modulation	MIX	MIXing
AMP	AMPlifier	MPX	Multi pleX
ANT	ANTenna	MW	Medium Wave (frequency)
BATT	BATTery	NC	No Connection
BLK	BLocK	NFB	Negative Feed Back
BUFF	BUFFer	OSC	OSCillator
COMP	COMPalator	PCB	Printed Circuit Board
DET	DETect (DETctor)	PLL	Phase Locked Loop
FLD		Q.D	Quadrature Detector
FM	Frequency Modulation	Rch	Right channel
FREQ	FREQuency	REF	REFerence
GND	GrouND	REG	REGulator
H	High	RF	Radio Frequency
HPF	High Pass Filter	SEG	SEGment
IF	Intermediate Frequency	SELE	SELEctor
IHF	Institut of High Fidelity	SENS	SENSitivity
IND	INDicator	SIG	SIGnal
I/O	In/Out	S/N	Signal to Noise Ratio
JW	Jumper Wire	SSG	Standard Signal Generator
L	Low	STD	STanDard
LCD	Liquid Crystal Display	SW	SWitch: Short Wave (frequency)
Lch	Left channel	THD	Total Harmonic Distortion
LED	Light Emiting Diode	TP	Test Point
LPF	Low Pass Filter	VCO	Voltage Controlled Oscillator
LW	Long Wave (Frequency)	VR	Variable Resistor
		X'TAL	Crystal

AKAI

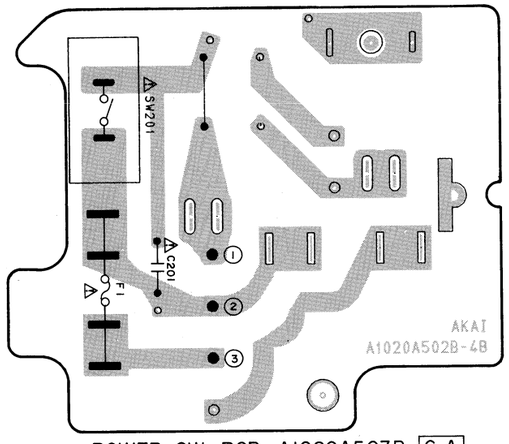
MODEL AA-V105/L

SCHEMATIC DIAGRAM AND PC BOARDS

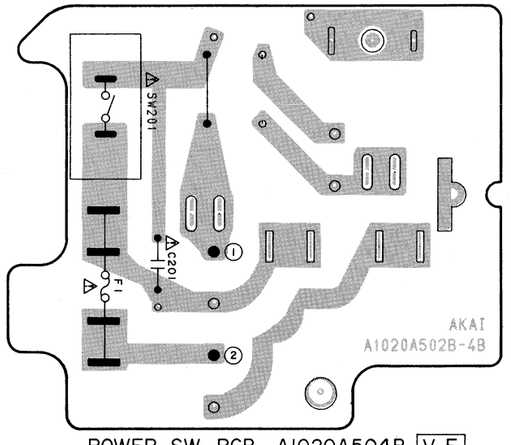
1. POWER SW PCB 1
2. LCD PCB, LED PCB, PHONE JACK PCB, PIN JACK PCB, TACT PCB, TONE PCB 2
3. AA-V105/L CONNECTION SCHEMATIC DIAGRAM 3
4. AA-V105/L MAIN SCHEMATIC DIAGRAM 4
5. AA-V105 MAIN PCB 5
6. AA-V105L MAIN PCB 6
7. AA-V105/L BLOCK DIAGRAM 7



POWER SW PCB A1020A502B [U]



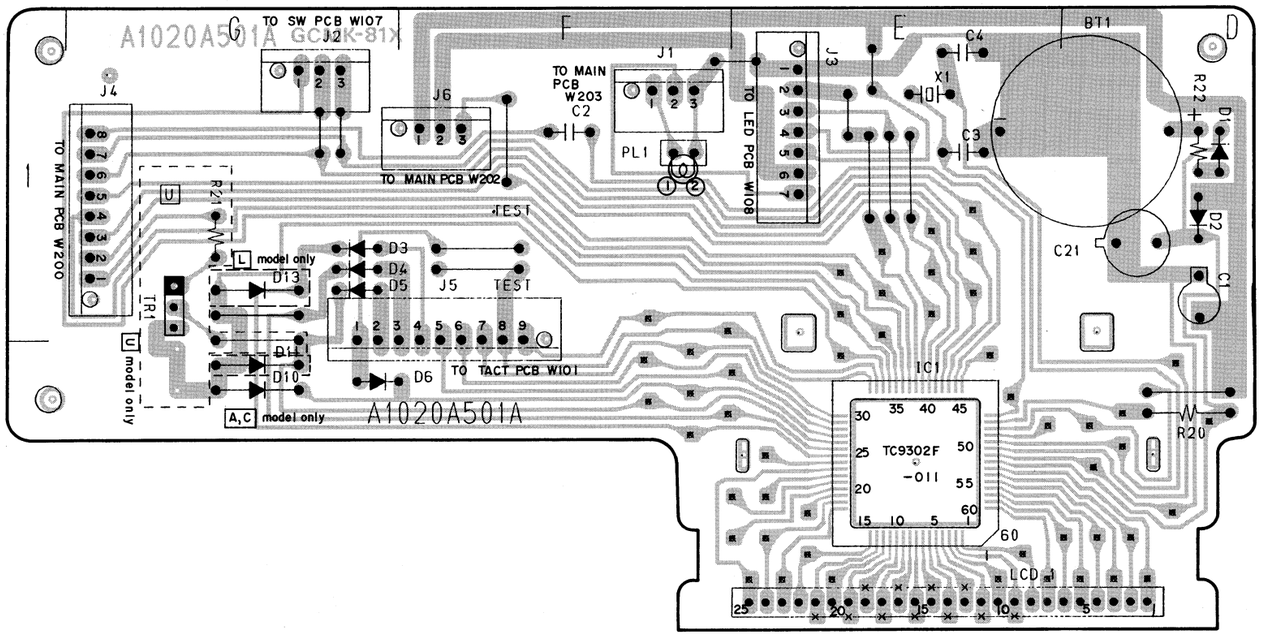
POWER SW PCB A1020A503B [C,A]



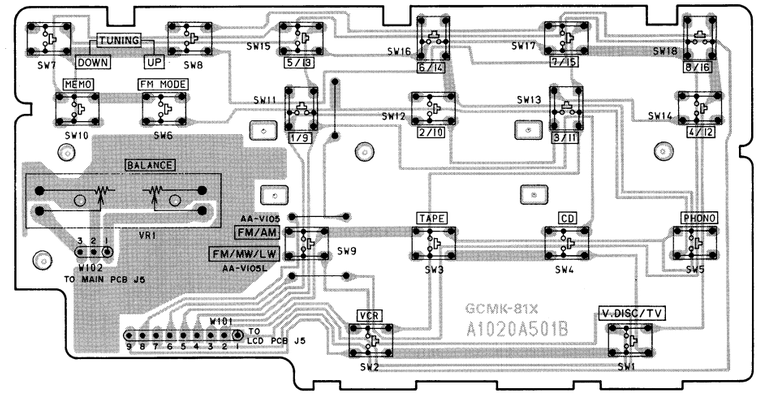
POWER SW PCB A1020A504B [V,E]
505B [S,B]

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

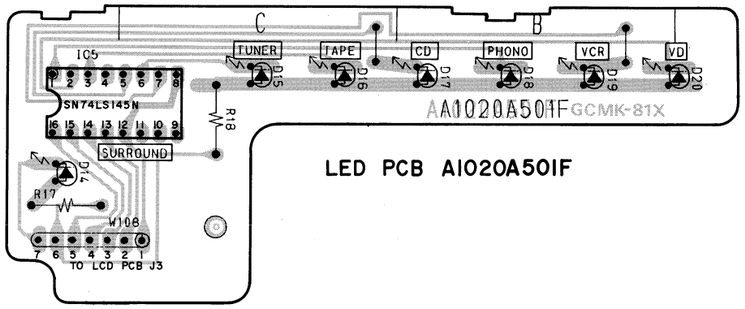
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



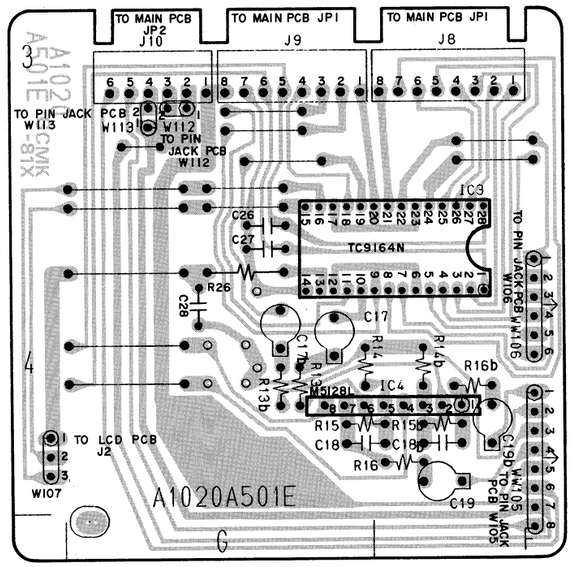
LCD PCB A1020A501A



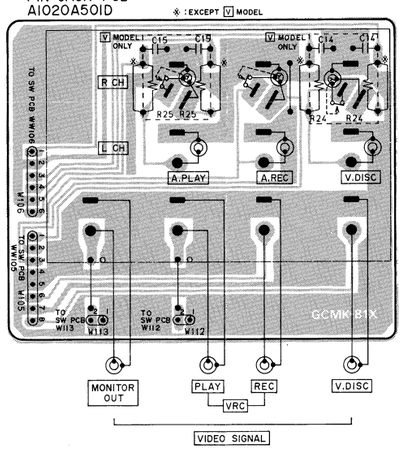
TACT PCB A1020A501B

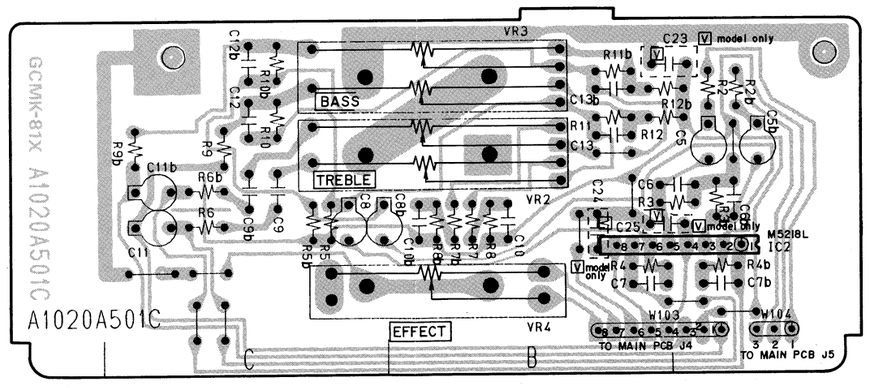


LED PCB A1020A501F

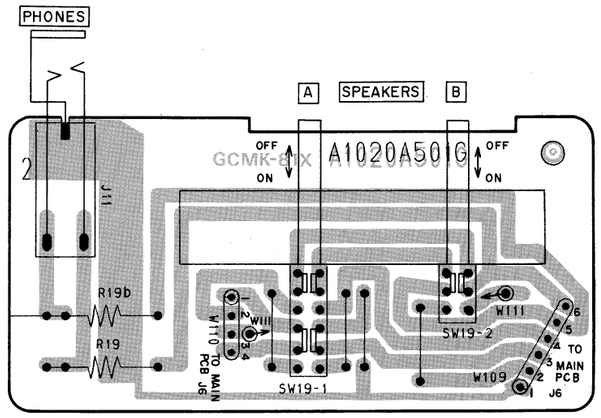


SW PCB A1020A501E





TONE PCB A1020A501C



PHONES PCB A1020A501G

LCD PCB A1020A501A

04

LCD1 9419X

MEMO TUNED STEREO DUAL

FM MW SW TV LW

MHz kHz MONO

IC1 TC9302F-011

D1 GMA-01

D2 GMA-01

BT1 BR2032

X1 HC-18U 4.22MHz

J4 REF D CK 9172 STB TUNE MONO ST 9k/10k

J2 9164 STB

J6 +5V MUTE +12V

J1 GND +12V

J5 D3 GMA-01 D4 GMA-01 D5 GMA-01 D6 GMA-01

KEY IN

STROBE OUT

AA-V105L ONLY D13 DS448

A,C MODEL ONLY D11 DS448

D10 DS448

TR1 2SA1317 (S,T,U)

U MODEL ONLY

J3

W101

PL1 12V/50mA

TACT PCB A1020A501B

05

BALANCE VR1 1M(W)

CH 4/12 SW14 · CH 3/11 SW13 · CH 2/10 SW12 · CH 1/9 SW11

CH 8/16 SW18 · CH 7/15 SW17 · CH 6/14 SW16 · CH 5/13 SW15

TUN DOWN SW7 · TUN UP SW8 · AA-V105 FM/AM SW9 · MEMO SW10

※SW9 AA-V105L FM/MW/LW

PHONO SW5 · FM MODE AUTO/MONI SW6

V.DISC/TV SW1 · VCR SW2 · TAPE SW3 · CD SW4

09

IC5 SN74LS145N

D14 to 20 SLP284C-50U

W108

VCR TUNER CD TAPE V.DISC PHONO

SURROUND D14 R17 1/4W 680

LED PCB A1020A501F

PHONE PCB A1020A501G

10

ON—OFF SW19-1 A SPEAKERS B SW19-2 R19 2W 180 R19b J11 PHONES

W110 W109

POWER SW PCB A1020A505B AA-V105L E,V

11

T901 A1020T-40 E,V

WHT 220V RED 0V

F1 SW201 C201 0.0047/400(P)

V,E AC220V 50Hz

POWER SW PCB A1020A504B S,B

11

T901 A1020T-50 B,S

BLU 240V RED 0V

F1 SW201 C201 0.0047/400(P)

S,B AC240V 50Hz

POWER SW PCB A1020A502B U

11

T901 A1020T-70 U

74V 20V

RED 0V BRN 110V YLW 120V ORG WHT 220V BLK

F1 F2 SW201 C201 0.01/250(Z)

U AC110 to 240V 50/60Hz

J901 AC OUTLET

SW901 VOLTAGE SELECTOR

POWER SW PCB A1020A503B C,A

11

T901 A1020T-30 C A1020T-20 A

YLW 120V RED 0V

F1 SW201 C201 0.01/400(P) R201 2M (K)

C,A AC120V 60Hz

J901

INDICATED VOLTAGES ARE MEASURED AT "FM" STEREO AND "TUNED" MODE

	U	C A	E B V S
F1	1.6A 250V	3.15A 125V	1.25A 250V
F2	1.6A 250V	——	——

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NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA

AA-V105/L CONNECTION DIAGRAM

NO.2-1 860514A 3

SW PCB A1020A501E

08

IC3 TC9164N

SWITCHING CONTROL

07

TONE PCB A1020A501C

06

IC2 M5218L

IC4 M5218L

PIN JACK PCB A1020A501D

03

FRONT END PCB
FE41(U)
FE41(V)

02

MAIN PCB

A1020A502A [U]
503A [C,A]
504A [E,V,S]
505A [E,B] (AA-V105L)

03
FRONT END PCB C1005B5040
HIGH RANG SENS.FM
EXCEPT V MODE
DISTORTION STEREO FM
LOW RANG SENS FM
V MODEL ONLY
HIGH RANG SENS.FM
FM OSC
ANTENNA
FM (75Ω)
AM
IF OUT
+FM
BT
OSC
G
ANT
02
* FL101 V SFE10.7MS53GK-A
EXCEPT V MODEL
SFE10.7MS2GY-A
FL102 SFE10.7MS2GY-A
MODEL AA-V105 ONLY
LOW RANG, SENS MW
HIGH RANG SENS.MW
MW OSC
MODEL AA-V105L ONLY
LOW RANG SENS MW
HIGH RANG SENS AM
LW OSC
LOW RANG SENS
MW OSC
IC1
M5218P-21
LCH
RCH
PHONO
CD
PLAY
TAPE
REC
IC3 M5218L
SURROUND SW1
VOLUME
VR1 100k(A)
IC2 LA7016
BUFFER
MIX
OSC
REG
LEVEL DIT
FM IF
DISTORTOAL MONO
3 STATE BUFFER
IF COUNTER
TEST
GND
+15V
-15V
+12V
P1
To SW PCB J8
P1b
From SW PCB J9
J5
To TONE PCB W103
J4
To TONE PCB W104
To TACT PCB W102
To SW PCB J10
= SIGNAL LINE
MAIN PC

F G H I J K

1 2 3 4 5 6 7 8

IC101 LA1265

IC102 TC9172

IC4 1/2 STK4172-2

IC4 1/2

IC2 LA7016

TR1 2SA1317 (S,T,U)

TR2 2SC2603 (E,F,G)

TR3 2SC3383 (S,T)

TR4 2SA1317 (S,T,U)

TR5 2SD1302 (R,S)

TR6 2SA1317 (S,T,U)

TR7 2SD1406 (O,Y,GR)

TR8 2SB1015 (Y,GR)

TR9 2SD612K (D,E,F)

TR10 2SD1406 (O,Y,GR)

TR11 2SC2603 (E,F,G)

TR12 2SA1317 (S,T,U)

TR13 2SC2603 (E,F,G)

TR101 2SC3383 (S,T)

TR102 2SC3383 (S,T)

TR103 2SC3383 (S,T)

TR104 2SC3383 (S,T)

TR105 2SC3383 (S,T)

TR106 2SC3383 (S,T)

TR107 2SC3383 (S,T)

TR108 2SC3383 (S,T)

TR109 2SC3383 (S,T)

TR110 2SC3383 (S,T)

TR111 2SC3383 (S,T)

TR112 2SC3383 (S,T)

TR113 2SA1317 (S,T,U)

TR114 2SA1317 (S,T,U)

TR115 2SC3383 (S,T)

TR116 2SA1317 (S,T,U)

T101 78-1126-02 DISTORTOAL MONO

T102 78-1129-01 CENTER VOLTAGE

T103 BCFLZ-450A MW IF

FL101 SFE10.7MS2GY-A

FL102 SFE10.7MS2GY-A

FL103 123-5010-03

L MODEL ONLY

V MODEL ONLY

U MODEL ONLY AM STAP

MPX FREE RUN FREQ

VR101 4.7k

VR102 330k STEREO SEPARATION

SW101 9KHz 10KHz

VCO 76KHz

PHASE LOCK DETECTOR

STEREO SWITCH LAMP DRIVER

ST-MON SW VCO STOP SW

PRE AMP

STEREO DEMODULATOR

Lch POST AMP

Rch POST AMP

OSC REG BUFFER MIX RF AGC AM-IF DET SD ADJ S METER

LEVEL DIT LEVEL DIT S CURVE LED DRIVER FM-IF QD POST AMP VCC

PSC F/F AMP FM HF LF HF(LF) PRESCA N1 COUNTER (4 BIT) N2 COUNTER (10 BIT) PHASE COMP P.I.I I/O PORT 4 BIT DATA BUS 4 BIT CODE BUS SEARIAL I/O PORT & CONTROL IF COUNTER (15 BIT) COUNTER CONT PORT OUTPUT PORT INPUT PORT STROBE CONTROL 3 STATE BUFFER TEST GND REF D CK STB

*R188 E-L,B 4.7K U,C,E 5.2K

*R150 E-L,B 3.9k U,C,A,S,E,V 5.1k

*R182 E 6.2k V,B,E-L 10k U,C,A,S SHORT

*R160 U,A,C,S 56k E,V,EL,BL 36k V 27K

*C145 C,A 820P U,E,V,S,EL,BL 510P(J)

	U	C A	E B V S
F3	5A250V	5A125V	4A250V
F4	5A250V	5A125V	4A250V
F5	5A250V	500mA125V	400mA250V

W200 REF D CK STB TUNE MONO ST To LCD PCB J4

W202 MUTE +12V +5V To LCD PCB J6

W203 To LCD PCB J1

TM1 B LCH A SPEAKER B RCH A

J3 LCH SURROUND SPEAKER (8-16Ω) RCH

J6 1 2 3 4 5 6 7 8 9 10 To PHONE PCB W110,W109

TO POWER TRANSFORMER

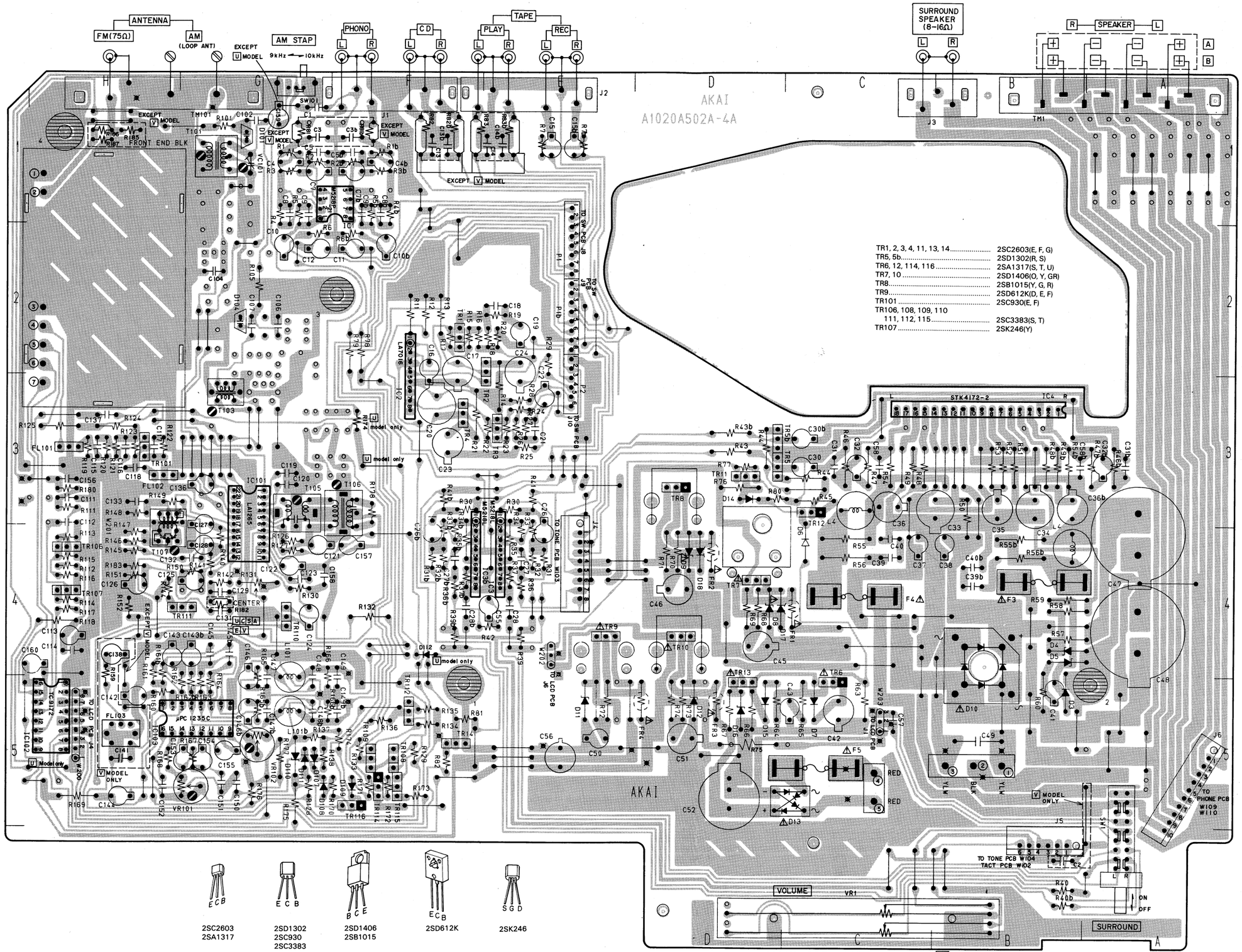
MAIN PCB

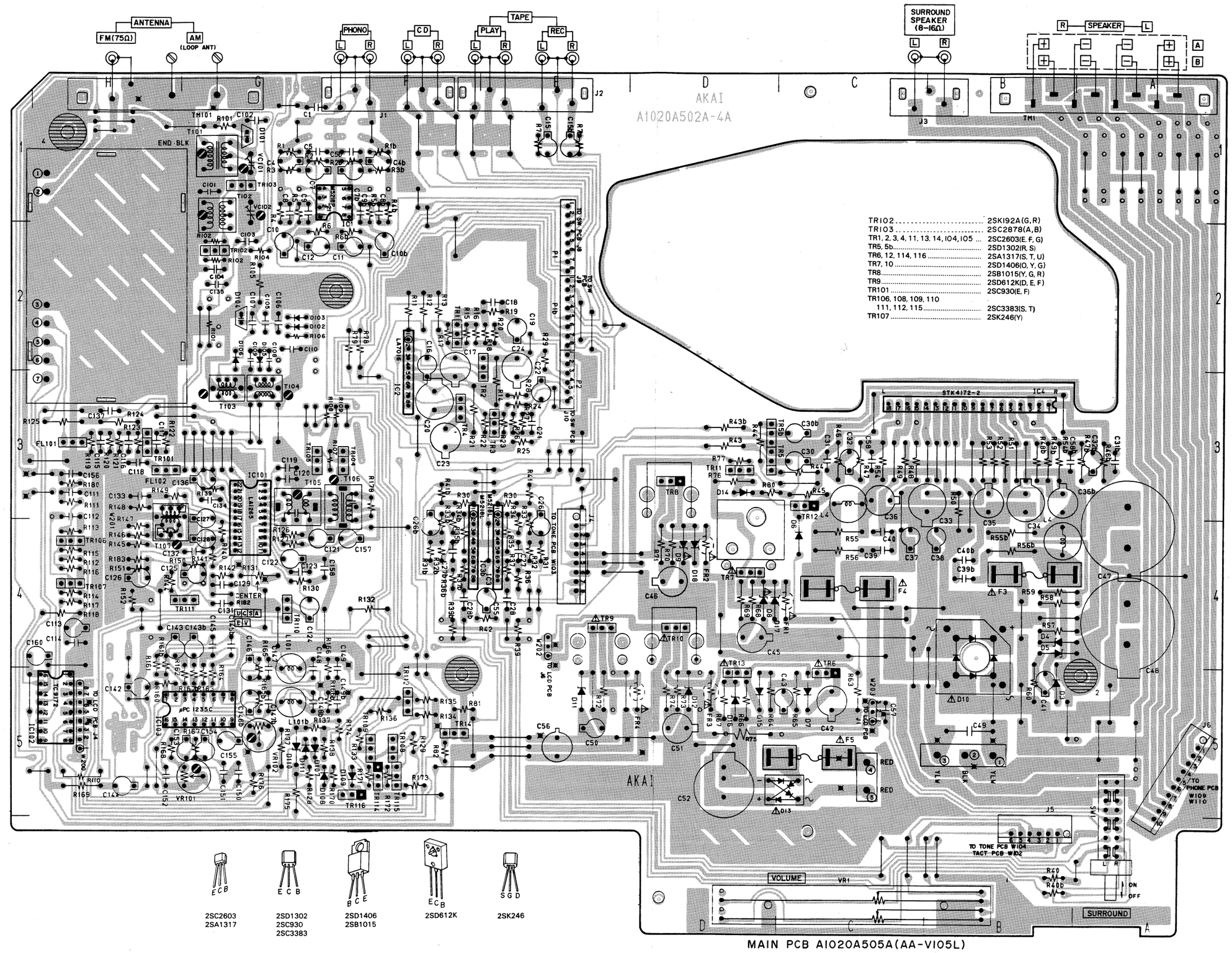
WARNING: △INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: △IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

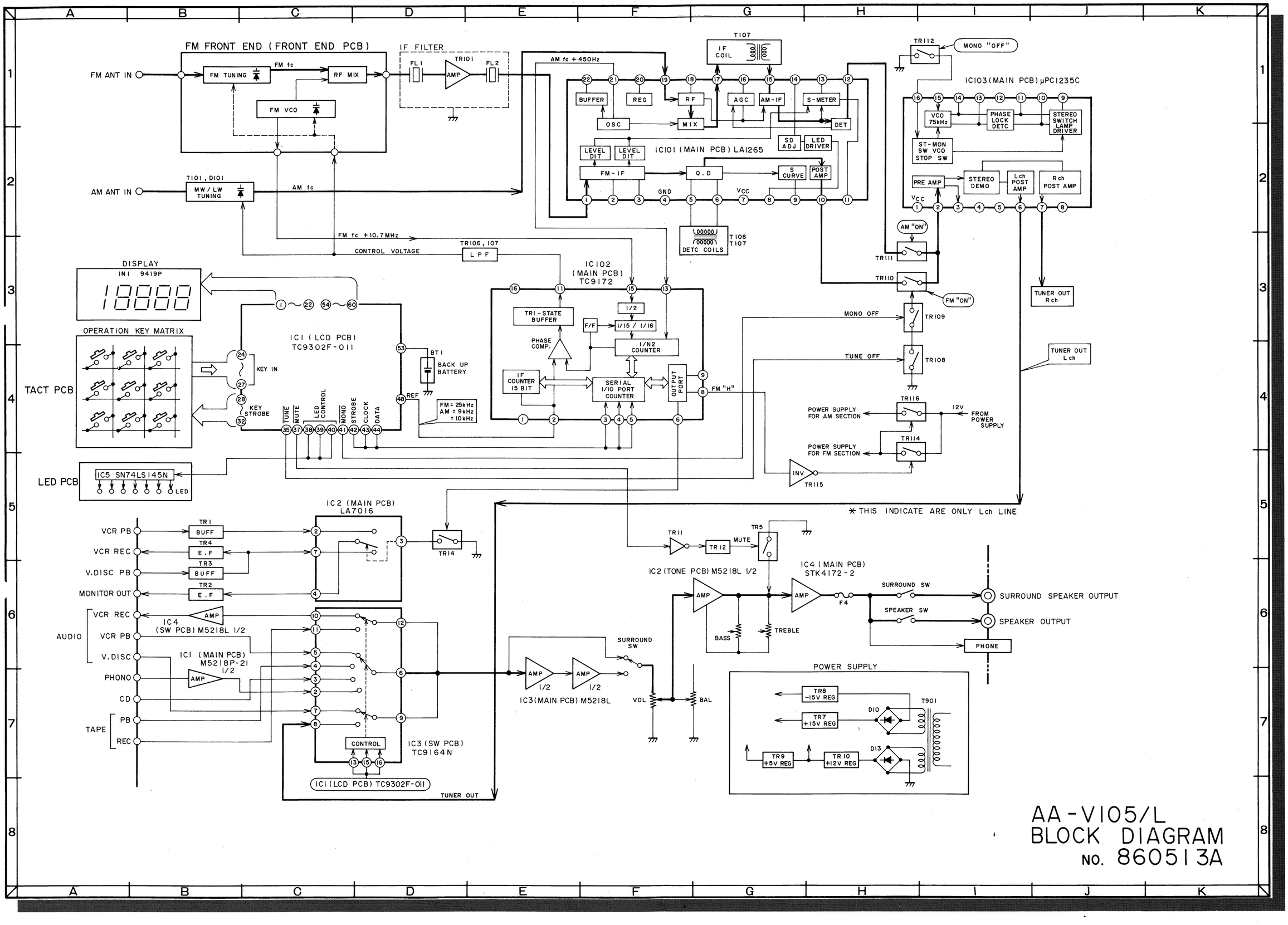
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

AA-V105/L MAIN SCHEMATIC DIAGRAM NO.2-2 860515A 3


ANTENNA
FM(75Ω)
AM
(LOOP ANT)
EXCEPT U MODEL
AM STAP
9kHz — 10kHz
PHONO
CD
TAPE
PLAY
REC
SURROUND SPEAKER (8–16Ω)
SPEAKER
AKAI
A1020A502A-4A
EXCEPT V MODEL
FRONT END BLK
U model only
V MODEL ONLY
TO TONE PCB W103
TO LCD PCB
TO PHONE PCB W109 W110
TO TONE PCB W104
TACT PCB W102
VOLUME
VR1
SURROUND
ON
OFF
STK4172-2
LA7016
LA1265
TC9272
μPC1235C
M52181
M52182
TR1, 2, 3, 4, 11, 13, 14 2SC2603(E, F, G)
TR5, 5b 2SD1302(R, S)
TR6, 12, 114, 116 2SA1317(S, T, U)
TR7, 10 2SD1406(O, Y, GR)
TR8 2SB1015(Y, G, R)
TR9 2SD612K(D, E, F)
TR101 2SC930(E, F)
TR106, 108, 109, 110
111, 112, 115 2SC3383(S, T)
TR107 2SK246(Y)
= PNP TRANSISTOR
= NPN TRANSISTOR
LOCATION OF TR'S
TR1 F2
TR2 E3
TR3 E3
TR4 F3
TR5 D3
TR5b D3
TR6 C5
TR7 D4
TR8 D3
TR9 E4
TR10 D4
TR11 D3
TR12 C3
TR13 D5
TR14 F5
TR101 H3
TR106 H4
TR107 H4
TR108 F5
TR109 F5
TR110 G4
TR111 F4
TR112 F5
TR114 F5
TR115 F5
TR116 F5
LOCATION OF ICS
IC1 F1/G1
IC2 F2/F3
IC3 E4
IC3b F4
IC4 B3/C3
IC101 G3/G4
IC102 H5
IC103 H5/G5
2SC2603
2SA1317
2SD1302
2SC930
2SC3383
2SD1406
2SB1015
2SD612K
2SK246
MAIN PCB A1020A502A U
A503A C, A
A504A E, V, S



MAIN PCB AI020A505A(AA-VI05L)



AA-V105/L
BLOCK DIAGRAM
NO. 860513A